

THE AMENDMENTS

A marked-up version of the claims that will be pending following entry of the present amendments showing the amendments made herein follows. Matter that has been deleted from the claims is indicated by strikethrough and matter that has been added is indicated by underlining.

1. (Previously Amended) A composition comprising isolated single-cell bipotent hepatic progenitors which express at least one intercellular adhesion molecule (ICAM) antigen and do not express major histocompatibility complex (MHC) class Ia antigen, in which the bipotent hepatic progenitors have a capacity to differentiate when exposed to differentiation-inducing growth conditions.
2. (Original) The composition of Claim 1 in which the hepatic progenitors express at least one MHC class Ib antigen.
3. (Previously Presented) The composition of Claim 2 in which the MHC class Ib antigen is weakly expressed in comparison to expression of ICAM as indicated by a dull positive response to immunostaining with fluorescent anti-MHC class 1b antibody in comparison to a positive response to immunostaining with anti-ICAM antibody.
4. (Original) The composition of Claim 1 in which the ICAM antigen is ICAM-1.

5. (Previously Presented) The composition of Claim 1 in which the hepatic progenitors have a sidescatter value determined by flow cytometry which is numerically less than the sidescatter value of mature parenchymal cells of the same species.

6. (Previously Presented) The composition of Claim 1 in which the hepatic progenitors have a sidescatter in flow cytometry which is between the sidescatter of nonparenchymal cells of the same species and the sidescatter of mature parenchymal cells of the same species.

7. (Original) The composition of Claim 1 in which the hepatic progenitors are capable of dividing and giving rise to progeny.

8. (Original) The composition of Claim 7 in which the hepatic progenitors exhibit a capacity for clonal growth.

9. (Original) The composition of Claim 8 in which the clonal growth requires extracellular matrix.

10. (Original) The composition of Claim 7 in which the progeny grow in piled-up clusters.

11. (Original) The composition of Claim 7 in which the progeny express alphafetoprotein, albumin, CK 19, or combinations thereof.

12. (Original) The composition of Claim 7 in which the progeny are hepatocytes or biliary cells.

13. (Original) The composition of claim 12 in which the hepatocytes or biliary cells additionally express a cell adhesion molecule that can be used for selection or identification of a particular subpopulation.

14. (Previously Presented) A composition comprising isolated single-cell hepatic progenitors, their progeny, or a combination thereof in which the hepatic progenitors and their progeny:

- (a) express at least one MHC class Ib antigen;
- (b) exhibit a numerically higher sidescatter value determined by flow cytometry than the sidescatter value of nonparenchymal cells of the same species;
- (c) express alpha-fetoprotein, albumin, CK 19, or combinations thereof; and
- (d) wherein the hepatic progenitors are capable of differentiating when exposed to differentiation-inducing growth conditions.

15. (Original) The composition of claim 14 in which the hepatic progenitors, their progeny, or a combination thereof are derived from endoderm or bone marrow.

16. (Original) The composition of claim 15 in which the endoderm is selected from liver, pancreas, lung, gut, thyroid, gonad, or combinations thereof.

17. (Original) The composition of claim 15 in which the progenitors express ICAM antigen.

18. (Original) The composition of claim 17 in which the ICAM antigen is ICAM-1.

19. (Original) The composition of claim 15 in which the progenitors do not express MHC class Ia.

20. (Previously Presented) The composition of claim 15 in which the progenitors weakly express at least one MHC class Ib antigen in comparison to expression of ICAM as indicated by a dull positive response to immunostaining with fluorescent anti-MHC class Ib antibody in comparison to a positive response to immunostaining with anti-ICAM antibody.

21. (Withdrawn) A method of obtaining a mixture of vertebrate cells enriched in hepatic progenitors comprising:

obtaining a cell suspension comprising vertebrate liver cells; and

removing from the cell suspension those cells that express at least one MHC class Ia antigen to provide a mixture of cells enriched in hepatic progenitors.

22. (Withdrawn) A method of obtaining a mixture of vertebrate cells enriched in progenitors comprising:

(a) obtaining a cell suspension of vertebrate cells; and

(b) sequentially in either order, or substantially simultaneously, removing from the cell suspension those cells that express at least one MHC class Ia antigen and isolating from the cell suspension those cells that are positive for an ICAM antigen, to provide a mixture of cells enriched in progenitors.

23. (Withdrawn) A method for identification of progenitor cells, comprising:

- (a) providing a cell suspension suspected of including progenitor cells; and
- (b) identifying cells which express ICAM antigen and do not express MHC class Ia antigen.

24. (Withdrawn) A method of obtaining a mixture of vertebrate cells enriched in hepatic progenitors comprising:

- (a) providing a vertebrate embryonic stem cell;
- (b) expanding the embryonic stem cell to give embryonic stem cell progeny;

and

isolating those embryonic stem cell progeny which express at least one ICAM antigen and do not express MHC class Ia antigen.

25-26. (Cancelled).